

GIKEN

SILENT PILER™

F501

- G1500

for Tubular Pile 1200,1500mm
for Tubular Sheet Pile 1200,1500mm



SILENT PILER™ F501-G1500

Silent Piler F501-G1500

Flexible and Functional Formula

1 Gyopress Method (Rotary Jack-in Method)

The Gyopress Method is a "reaction based" rotary jack-in method to install tubular piles with cutting bits with self-walking functions. The Gyopress Method enables tubular piles to be installed through existing structures or buried obstructions. Therefore, by this method, construction costs and time can be minimized simultaneously, due to the avoidance of enabling removal works.

Cutting Reinforced Concrete

The followings present cutting off performance through reinforced concrete (t = 80 cm, $\sigma_{ck} = 24 \text{ N/mm}^2$, D16@250 x 3 layers).



2 Applicable to 1,200mm and 1,500mm O.D. Tubular Pile

The F501-G1500 can install tubular piles ($\phi 1200\text{mm}$ and 1500mm O.D.) and tubular sheet piles ($\phi 1200\text{mm}$ and 1500mm O.D.) by changing only the Chuck jaws and Clamp jaws. Spacing between Clamps of the F501-G1500 can be adjusted by hydraulic cylinders at an optional distance.



*For Tubular Sheet Piles (Tubular Piles with external interlocks), optional Chuck jaws are required.

3 Outstanding Environmentally-Friendly Design

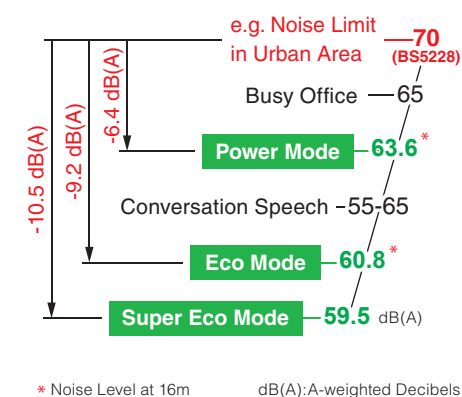
Low Emission Engine

The Power Unit of the F501 is a new generation model and has environmentally-friendly specifications. It is designed with strict concepts for clean emissions with high combustion efficiency and GIKEN's original hydraulic control technologies.



Ultra Low Noise Level

It clears allowable construction noise levels in many industrialised countries.



Standard Application of Biodegradable Oil

The F501 uses bio-degradable Piler Eco Oil and Piler Eco Grease. Hence, if hydraulic oil or grease is spilled into soil or water, there will be no environmental damage to the surrounding ecosystem. In addition, the machines are painted with TX-Free non-leaded paint*.

* Environmentally-friendly paint which does not contain toluene, xylene and lead based pigment.



4 Scientific Execution of Press-in Work & Advanced IT Functions

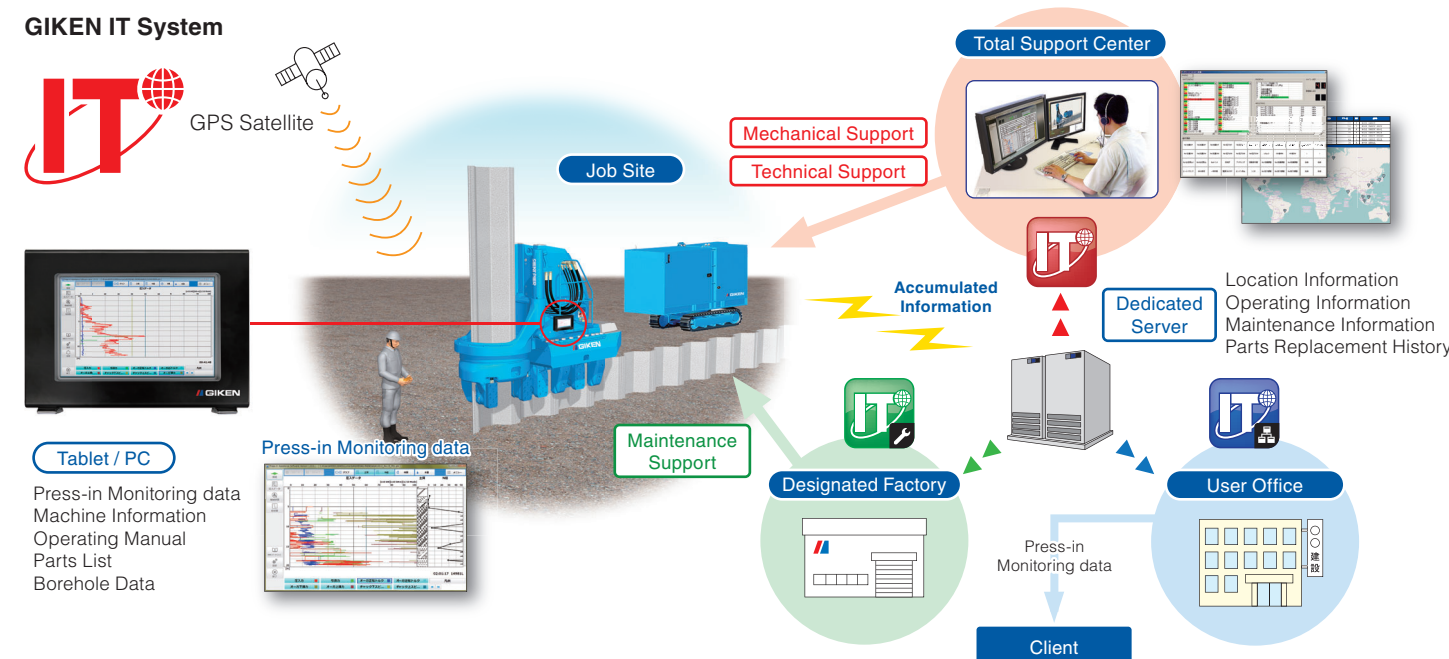
GIKEN IT System

GIKEN's engineers can monitor individual Silent Pilers, such as operating condition, maintenance records and location. Quick advice for any technical troubles is available promptly and appropriate information can also be provided to prevent troubles.

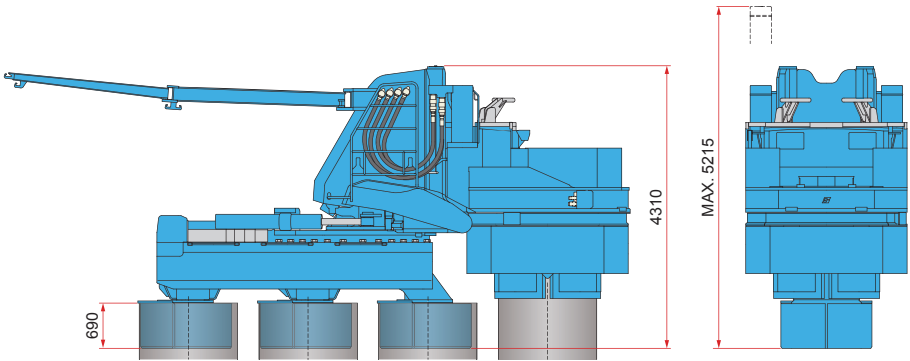
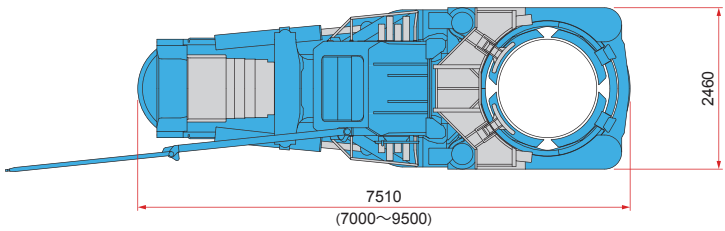
* The system is not available in the countries where authorisation for usage cannot be acquired.

Press-in Monitoring and Data Logging System

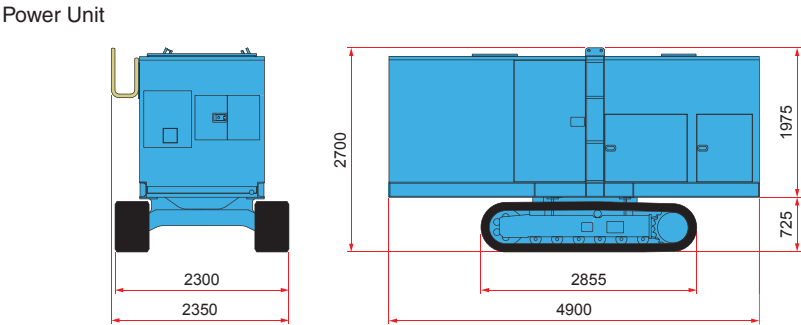
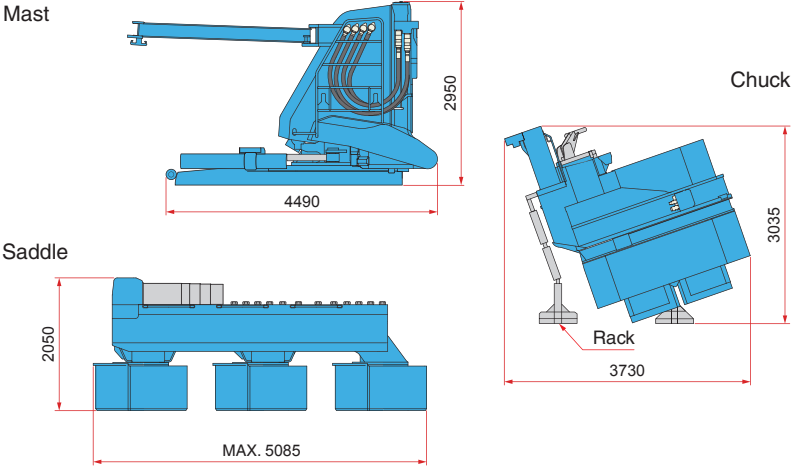
Press-in monitoring data can be used for quality control and information modelling of the foundation. Operators are able to keep working while checking data such as press-in force, auger torque, and working hours of press-in work, on a tablet or PC (both optional extras).



Dimensions & Specifications



Dismantled Gyro Piler in 3 Pieces



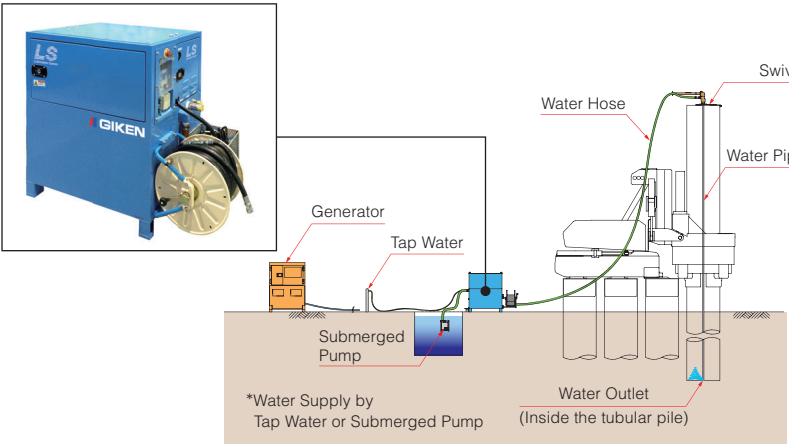
SILENT PILER	F501-G1500
Applicable Piles	Tubular Pile ϕ 1200, 1500 mm Tubular Sheet Pile ϕ 1200, 1500 mm ^{*1}
Max. Press-in Force	with Chuck Rotation ^{*2} 3200 kN without Chuck Rotation 4000 kN
Max. Extraction Force	with Chuck Rotation ^{*2} 3600 kN without Chuck Rotation 4500 kN
Chuck Rotation Torque	2200 kN·m
Chuck Rotation Velocity	1.8 ~ 10.0 min ⁻¹
Stroke	1200 mm
Press-in Speed	0.4 ~ 2.5 m/min
Extraction Speed	1.0 ~ 2.4 m/min
Applicable Pile Spacing	for 1200mm 1250 ~ 1825 mm for 1500mm 1550 ~ 1825 mm
Control System	Radio Control
Movement	Self-Moving
Mass	for 1200mm 65450 kg for 1500mm 68600 kg

^{*1} For Tubular Sheet Piles (Tubular Piles with external interlocks), optional Chuck jaws are required.
^{*2} An external power source is required for Chuck rotation. (200V-50/60Hz, 220V-60Hz, Min. 30KVA, 3 phases)

	Mast
Mass ^{*3}	21750 kg
^{*3} Excluding Mast Stage	
	Saddle
Mass	for 1500mm 22550 kg for 1200mm 20050 kg
	Chuck
Mass	for 1500mm 24300 kg (for Gyropress Mode) for 1200mm 23650 kg
Mass	for 1500mm 23850 kg (for Tubular Sheet Pile) for 1200mm 23350 kg

Power Unit	EU500C3
Power Source	Diesel Engine
Power Mode	377 kW(513 ps)/1800 min ⁻¹
Rated Output	Eco Mode 335 kW(456 ps)/1600 min ⁻¹ Super Eco Mode 293 kW(399 ps)/1400 min ⁻¹
Fuel Tank Capacity	850 L
Hydraulic Reservoir	Piler ECO Oil 660 L
Moving Speed	1.4 km/h
Mass	10950 kg (with 30m Hose)

Lubrication System



Lubrication System	OP114A
Input Voltage(3 phases)	AC200V, 50/60Hz, 24KVA or more
Water Pump Discharge Rate	Max. 60 L/min
Water Pump Discharge Pressure	Max. 6 MPa
Outer Dimension(W x D x H)	1505 x 755 x 1230 mm
Water Tank Capacity	300 L
Mass(without water)	410 kg

^{*}The above specifications are subject to alteration without prior notice.

Silent Piler Model and Applicable Pile

Silent Piler Model	Tubular Pile (Diameter : mm)							Tubular Sheet Pile (Diameter : mm)					
	600	800	1000	1200	1500	2000	2500	600	800	1000	1200	1500	2000
F301-G1000	●	●	●					●	●				
F401-G1200		●	●	●					●	●			
F501-G1500				●	●						●	●	
GRV2540						●	●						●

Auxiliary equipment													
CB3-6	Clamp Crane Max. Lifting Capacity : 10t		●	●	●				●	●	●		
CB4-2	Clamp Crane Max. Lifting Capacity : 20t		●	●	●	●			●	●	●	●	
PR2	Pile Runner Load Capacity : 5t		●	●	●	●			●	●	●	●	
UR5	Unit Runner (for Power Unit EU500)		●	●	●	●			●	●	●	●	

Performance Comparison of Gyro Piler Models

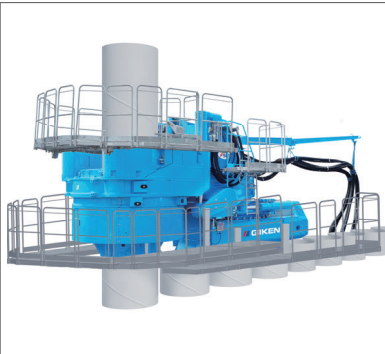
With greater torque and chuck rotation speed, F501-G1500 is capable of installing longer tubular piles at a faster rate.

Model	F301-G1000	F401-G1200	F501-G1500
Length	4000mm~5300mm	5735mm~7955mm	7000mm~9500mm
Height	2815mm	3290mm	4310mm
Width	1800mm	2070mm	2460mm
Mass	17150kg	33600kg	68600kg
Max. Press-in Force (without Chuck Rotation)	700kN	2000kN	4000kN
Max. Extraction Force (without Chuck Rotation)	850kN	2200kN	4500kN
Chuck Rotation Torque	600kN·m	900kN·m	2200kN·m
Chuck Rotation Velocity	MAX10.0min ⁻¹	MAX11.0min ⁻¹	MAX10.0min ⁻¹

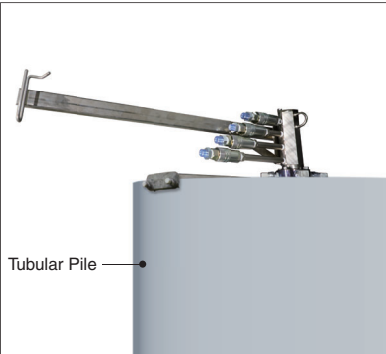
Standard Accessories

*Accessories vary depending on sales package.

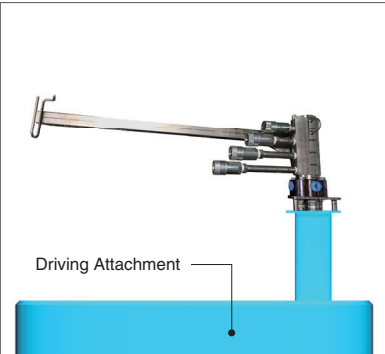
● Piler Stage
ST49



● Water Hose Swivel
OP149 (for Tubular Pile)



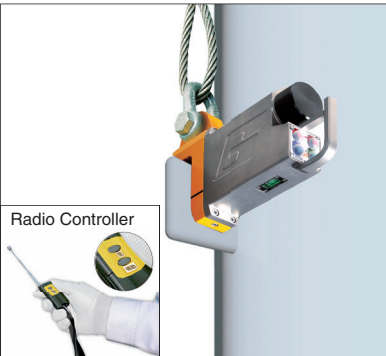
● Water Hose Swivel
OP150 (for Driving Attachment)



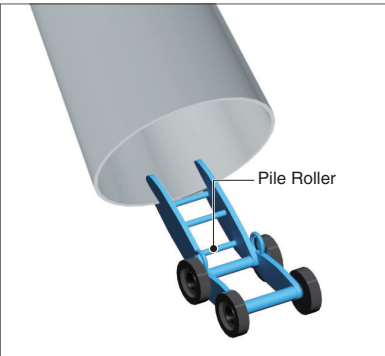
● Tablet / PC



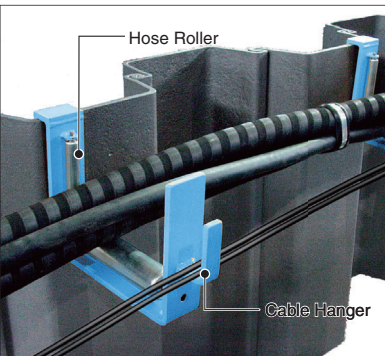
● Radio Control Shackle (5t)
RH5A



● Pile Roller



● Hose Roller



● Pile Laser
PL-3



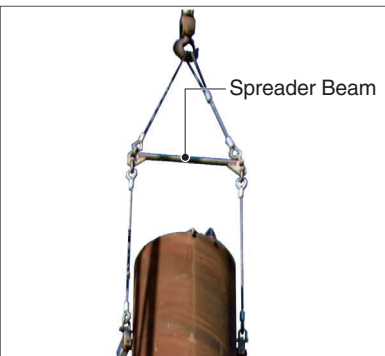
● Lubrication System
OP114A



● Module Box
(from the left, MB17, MB14 and MB15)



● Spreader Beam
OP134 (φ1200mm~φ1500mm)



Optional Accessories

*Accessories vary depending on sales package.

● Driving Attachment
AM171 (φ1200mm)



● Driving Attachment
AM172 (φ1500mm)



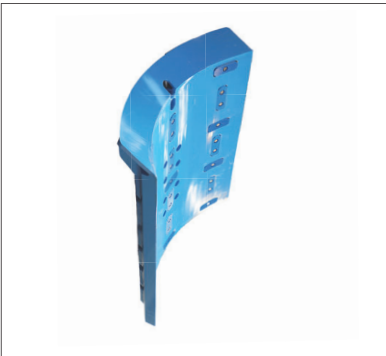
● Piler Jet Reel
JR19 (with mounting bracket)



● Chuck Jaw for Tubular Sheet Pile
OP192 (φ1200mm)



● Chuck Jaw for Tubular Sheet Pile
OP193 (φ1500mm)



Driving Attachment		
Mass	AM171 (φ1200mm)	5250 kg
	AM172 (φ1500mm)	6800 kg

Piler Jet Reel		JR19
Mass		1800 kg ^{*4}
^{*4} Minus mounting bracket		

Chuck Jaw for Tubular Sheet Pile		
Mass	OP192 (φ1200mm)	2640 kg ^{*5}
	OP193 (φ1500mm)	3160 kg ^{*5}
^{*5} : 4 Jaws (minus storage rack)		

● Press-in Piling Total System (PPTS)

F501-G1500 monitors real-time press-in data during pile installation.

The data is automatically converted to SPT N values and recorded on a tablet PC, "G-Terminal".

This can be used for "as-built information" and "quality assurance" on each project.



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